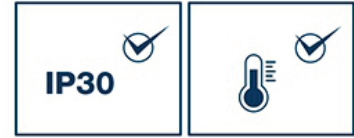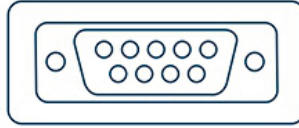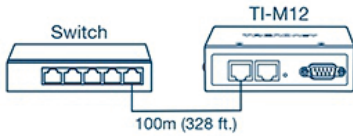# TRENDNET®



# Industrial Modbus Gateway

## TI-M12 (v1.0R)

- 1 x serial port, 2 x Fast Ethernet ports
- Connects RS-232/RS-422/RS-485 serial device, such as a modem, to a network
- Supports up to 32 RS-422/RS-485 TCP serial devices per port
- Supports DHCP, automatically obtain an IP address and query IP address through serial setting protocol
- Configure via web management or telnet
- Auto-MDI/MDIX, RJ45 port with 10/100Mbps
- Serial port baud rate from 50bps to 921.6Kbps
- Wide operation temperature range -40° - 75° C (-40° – 167° F)
- IP30 rated metal housing

TRENDnet's Industrial Modbus Gateway, model TI-M12, provides one port serial connection and two fast Ethernet ports at distances up to 100m (328 ft.) using Cat5e cabling. This industrial modbus gateway allows users to connect a modbus serial device to a network.

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### Network
Two fast ethernet ports support distances up to 100m (328 ft.) using Cat5e cabling.
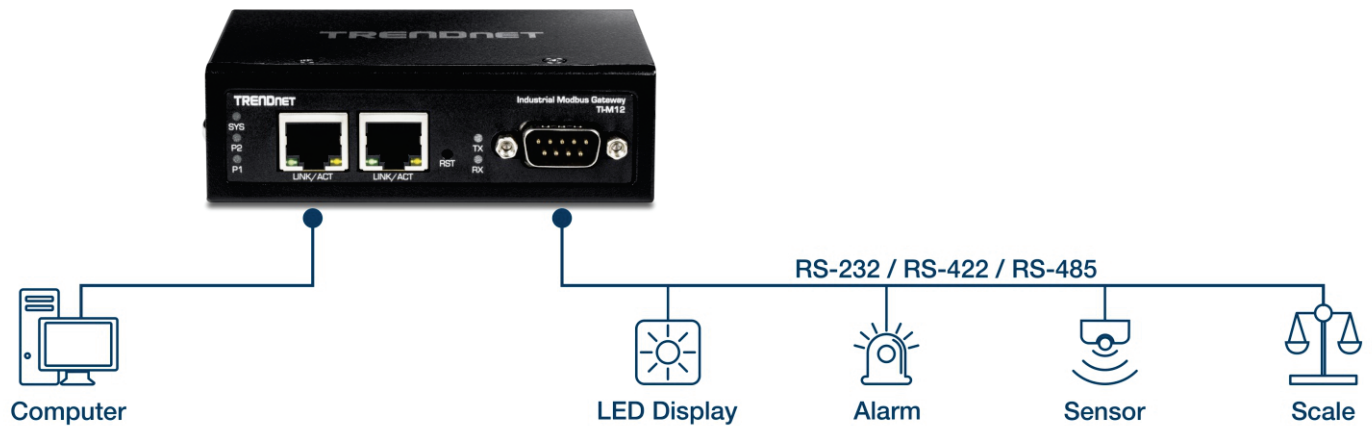
### Serial Connector
Easily connect RS-232/RS-422/RS-485 serial devices to the network.

### Industrial Design
Designed with a rugged IP30 rated housing, vibration and shock resistance, ESD/EMI/surge protection, and a wide operation temperature range -40° - 75° C (-40° – 167° F).

## NETWORKING SOLUTION



RS-232 / RS-422 / RS-485

Computer    LED Display    Alarm    Sensor    Scale



LED indicators

2 x 10/100Mbps ports

1 x Serial (DB-9) port

Grounding point

4-pin removable terminal block

DIN-Rail mount

Wall mount

# TRENDNET®

## FEATURES

**Network**
This modbus converter features two fast ethernet ports that support distances up to 100m (328 ft.) using Cat5e cabling
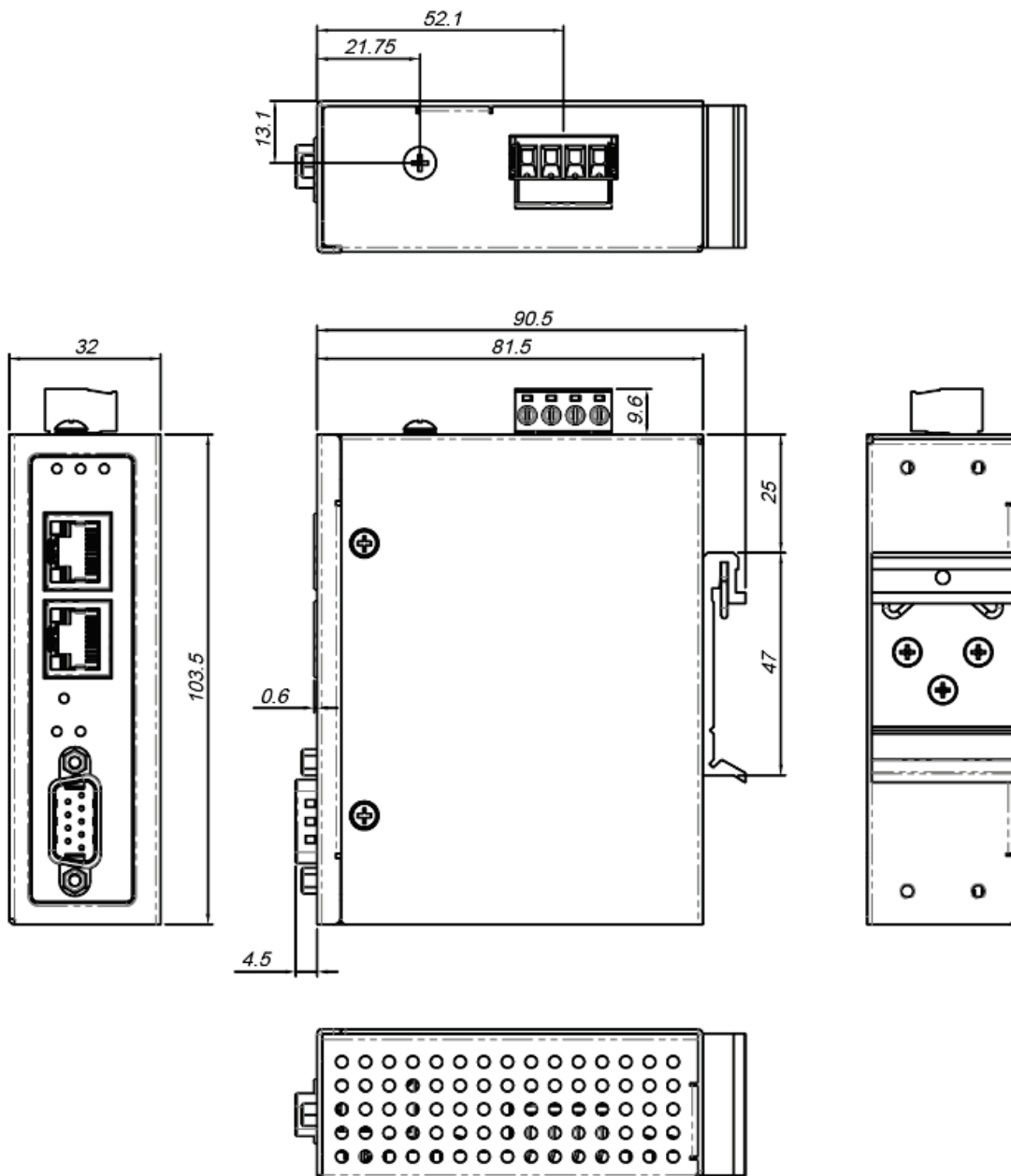
**Serial Connector**
The modbus RTU to TCP gateway easily allows users to connect RS-232/RS-422/RS-485 serial devices to the network

**Industrial Design**
This modbus gateway is designed with a rugged IP30 rated housing, resistance to a high degree of vibration and shock, protection against ESD/EMI/surges, and a wide operation temperature range -40° - 75° C (-40° – 167° F)

## HOUSING DIMENSION (mm)

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# SPECIFICATIONS

## Standards

- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- RFC 768 UDP
- RFC 793 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 854 Telnet
- RFC 958 NTP
- RFC 1591 DNS (client only)
- RFC 1908 SNMP v2c
- RFC 2068 HTTP
- RFC 2131 DHCP Client
- EIA / TIA RS-232 / RS-422 / RS-485

## Device Interface

- 1 x Serial (DB-9) port
- 2 x 10/100Mbps ports
- 4-pin removable terminal block
- LED indicators
- DIN-Rail mount
- Wall mount
- Grounding point

## Data Transfer Rate

- 50bps – 921600bps

## Performance

- Data RAM Buffer: 8 Bit
- MAC Address Table: 2K entries
- Parity Type: Even, Odd, None, Space, Mark
- Stop Bit: 1 or 1.5/2

## Special Features

- Supports RS-232, RS-422 and 2-wire RS-485
- Web / Telnet / Windows ®-based management
- Supports RTU Master / Slave and ASCII Master / Slave
- Hardened components rated for extreme temperatures
- Redundant power inputs

## DC Power

- Input: 12 – 56 V DC
- Compatible power supply: TI-M6024 (sold separately)
- Max. consumption: 3.84W @ 48V DC

## Terminal Block

- Redundant power inputs, 4-pin
- Wire range: 0.34mm^2 to 2.5mm^2
- Solid wire (AWG): 12-24/14-22
- Stranded wire (AWG): 12-24/14-22
- Torque: 5 lb. – In / 0.5Nm / 0.56 Nm
- Wire strip length: 7-8mm

## MTBF

- 521,243 hours

## Housing

- IP30 metal case
- DIN-Rail mount
- Grounding point

## Operating Temperature

- - 40° – 75° C (-40° – 167° F)

## Operating Humidity

- Max. 95 % non-condensing

## Dimensions

- 103 x 80 x 31mm (4 x 3.14 x 1.22 in.)

## Weight

- 154g (5.4 oz.)

## Certifications

- CE
- FCC
- Shock (IEC 60068-2-27)
- Freefall (IEC 60068-2-32)
- Vibration (IEC 60068-2-6)
- IEC 61000-4-2
- IEC 61000-4-4
- IEC 61000-4-5

## Warranty

- 3 year

## Package Contents

- TI-M12
- Quick Installation Guide
- Removable terminal block
- DIN-Rail and wall mount kit

| Pinout | Male DB9 | Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RS-232 | DCD | RxD | TxD | DTR | GND | DSR | RTS | CTS | - |
| | | RS-422 | TxD+ (A) | TxD- (B) | RxD- (B) | RxD+ (A) | GND | - | - | - | - |
| | | RS-485 | - | - | Data- (B) | Data+ (A) | GND | - | - | - | - |

All references to speed are for comparison purposes only. Product specifications, size, and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.